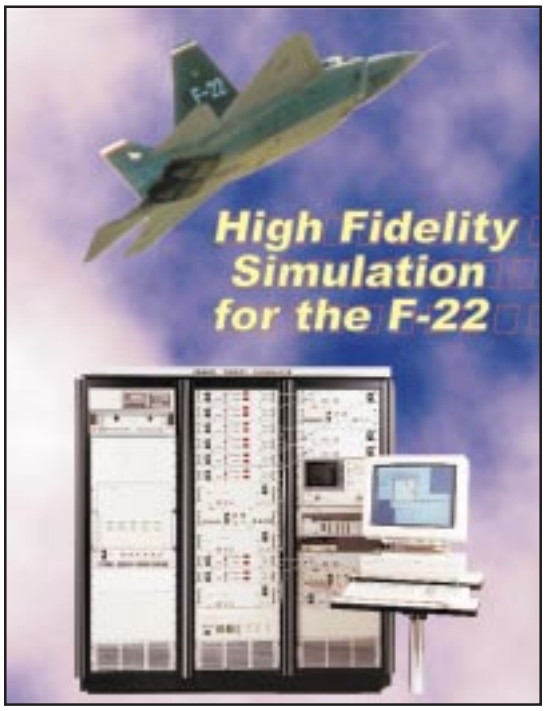
New Simulator Technology Transitioned to F-22 System Program Office



Payoff

The new simulator technology enables the Air Force to generate the electronic combat synthetic battlespace required to rapidly develop and prototype advanced radar warning receiver algorithms to meet the quickly evolving and changing threat environment faced by the warfighter.

Accomplishment

The Sensors Directorate's (SN) Electronic Warfare Technology Evaluation Branch developed, demonstrated and transitioned real-time hardware-in-the-loop simulation technology to the F-22 System Program Office (SPO). This new simulator technology base enabled the F-22 SPO to initiate a $25 million Advanced Dynamic Radio Frequency Simulator development to address an avionics integration requirement.

Background

The integration of the advanced F-22 distributed avionics architecture required a new high fidelity hardware-in-the-loop simulator capability which could not be developed with the existing simulator technology base. The Sensors Directorate's Small Business Innovation Research (SBIR) initiatives with Amherst Systems Inc. of Buffalo, NY, pioneered the evolution of the new simulator technology base, which allows for the rapid development, integration, optimization and evaluation of advanced radar warning receiver capabilities for electronic warfare. Amherst Systems incorporated this technology into their simulator products making it available to all Department of Defense (DoD) agencies and contractors. It is being incorporated into simulator developments for the Directorate's Integrated Demonstrations and Applications Laboratory, the Air Force Electronic Combat Integration Facility at Edwards AFB, CA, and several aircraft development programs.